



PRESENTERS

Ken Hinkle - Associate Chief, Code 540

Lee Feinberg - Assistant Chief, Code 550

Bob Kichak - Associate Chief, Code 560

Marty Frederick - Associate Chief, Code 570

Doug McCuistion - Associate Chief, Code 580

Steve Neeck - Deputy Chief, Code 730.2



A Bit of History

- › **Capabilities Assessment Strategy Team Recommends Internal Customer Interchanges Last Winter**
- › **STAAC and AETD Engineering Core Competency Activity Launched Last Spring**
- › **600 and 900 Lab Forums Held Last Summer**
 - Individual Labs Present to STAAC and AETD Managers
 - Seven Forums Held from June to August
- › **Project Goddard Core Competency Activities Peak Last Fall**



What You Will See Today

AGENDA

- › **1:00 to 1:15 Introduction and Context Setting**
- › **1:15 to 1:45 Code 540 - Mechanical Systems Center**
- › **1:45 to 2:10 Code 550 - Instrument Technology Center**
- › **2:10 to 2:40 Code 560 - Electrical Systems Center**
- › **2:40 to 3:05 Code 570 - Guidance, Navigation and Control Center**
- › **3:05 to 3:30 Code 580 - Information Systems Center**
- › **3:30 to 3:50 Code 730 - Systems Engineering Division**
- › **3:50 to 4:00 Closing with Questions and Answers**



Web Location for Presentation Package



- › **Under the title of "Engineering Presentation to the Earth Sciences Directorate", you will be able to find a PowerPoint version of our presentation at:**

http://isc.gsfc.nasa.gov/info_dis.htm



Other Valuable Links

Applied Engineering and Technology Directorate Homepage

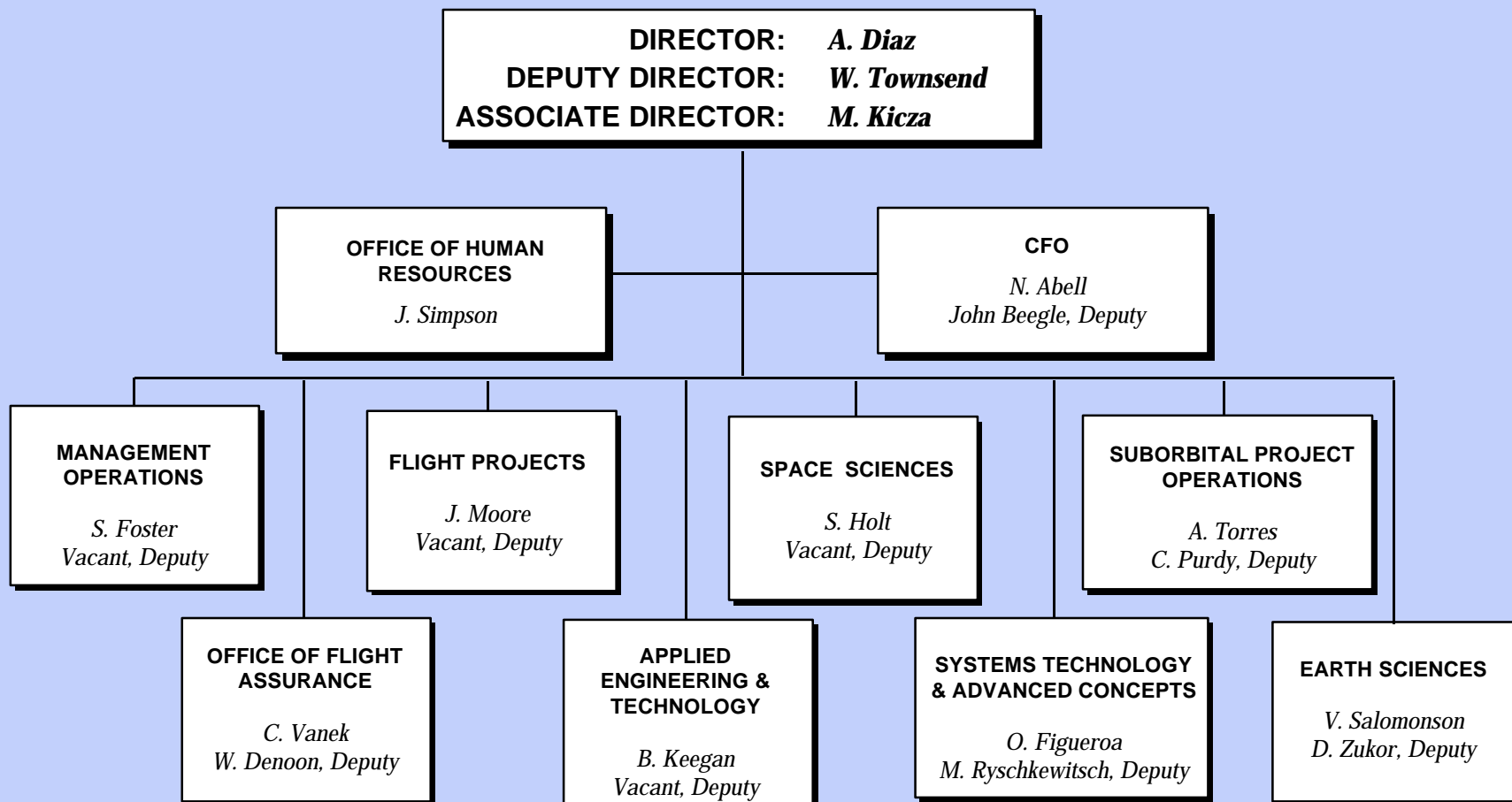
- › **<http://aetd.gsfc.nasa.gov/>**

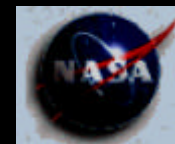
Systems, Technology, and Advanced Concepts Directorate Homepage

- › **<http://www701.gsfc.nasa.gov/>**

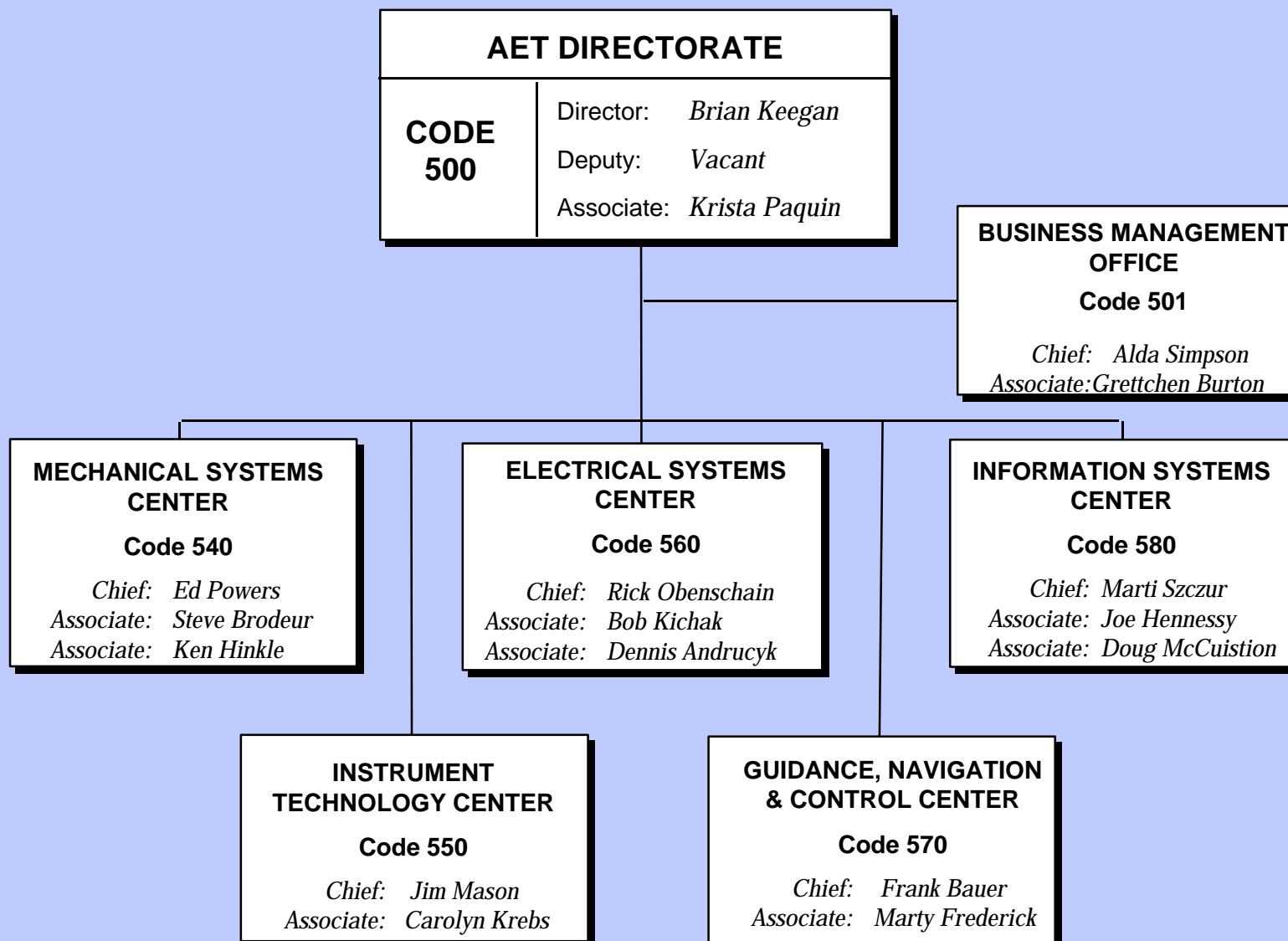


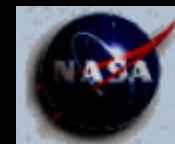
GSFC Organization





AETD Organization





AET Directorate Staff

DIRECTOR

DEPUTY DIRECTOR

ASSOCIATE DIRECTOR (0)

7

Chief Engineer
Dick Freeman
Associate Chief Engineer
Madeline Butler

- Provide Flight / Ground System Technical Assessment Via GSFC Review Program
- Review / Approve AETD / Internal Anomaly Plans & Closures
- Chair / Participate on Anomaly Panels (as requested)
- Review / Approve AETD Technical Publications

2

(0)

Assistant for Engineering Support
Mitch Brown

- Facility and Equipment Planning and Development
- Space Planning
- Engineering Processes (ISO 9000) CI, Knowledge Captures
- Operational Safety and Security
- LAN Management / Administration

4

(0)

Business Management Office

16

(0)

- Level 3 Technology, R&D MPS Budget Planning / Tracking
- Travel Budget
- Training Budget
- Manpower Planning/Tracking
- Reimbursables
- Business Support

Engineering Centers

1216

(93)

Chief Technologist
John Day

- Chair GSFC Technology Federation
- Chair, AETD Technology Working Group
- AETD Technology Program Advocate
- AETD Technology Program Integration
- GSFC Level III Technology Strategic Planning

2

(0)

Assistant for Wallops
Steve Nelson

- Coordination of AETD Activities at WFF
- Liaison for AETD Customers at WFF
- AETD Advocate for WFF Personnel

2

(2)

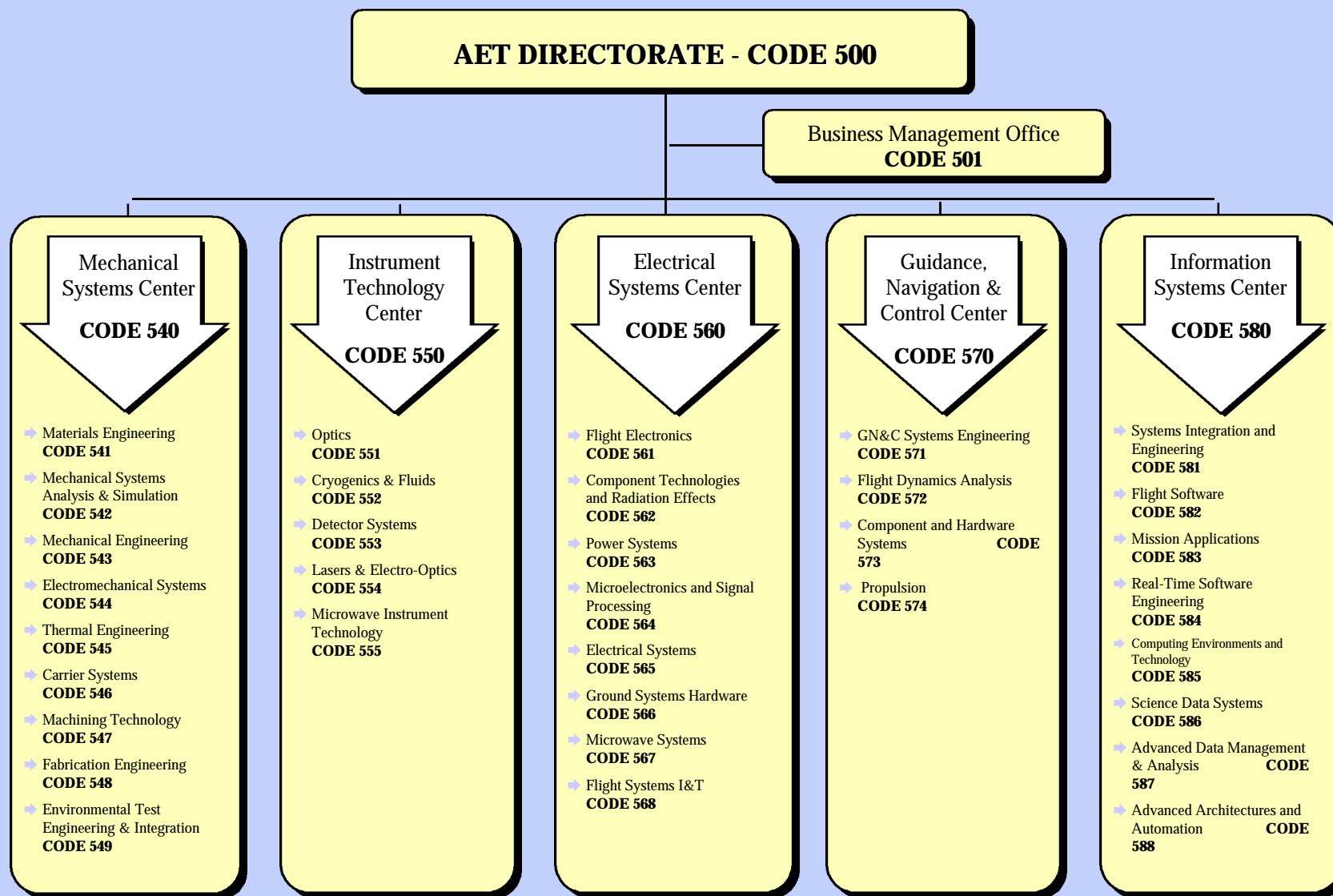
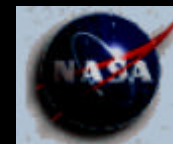
KEY:

XX = Approx. Total Staff

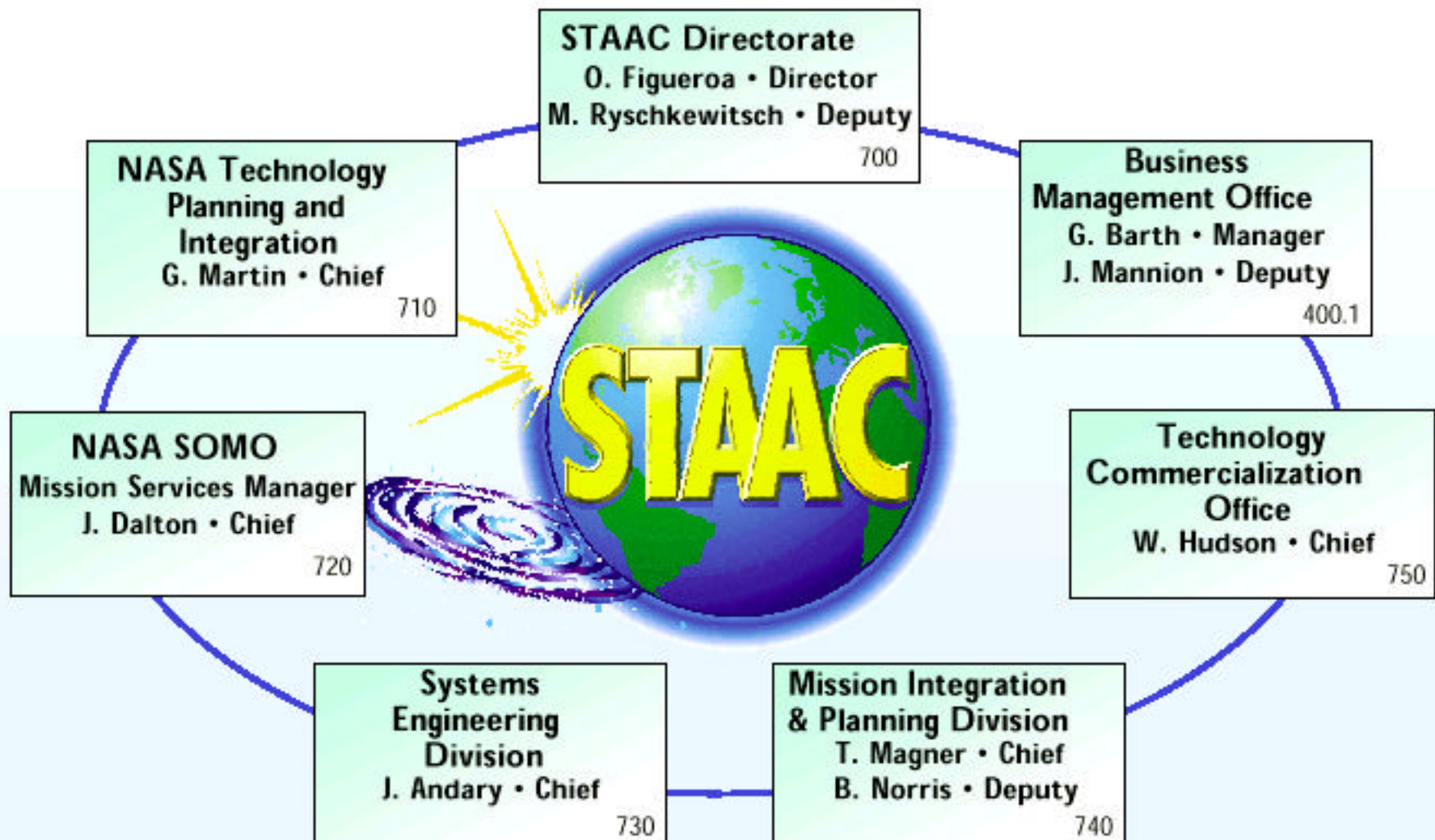
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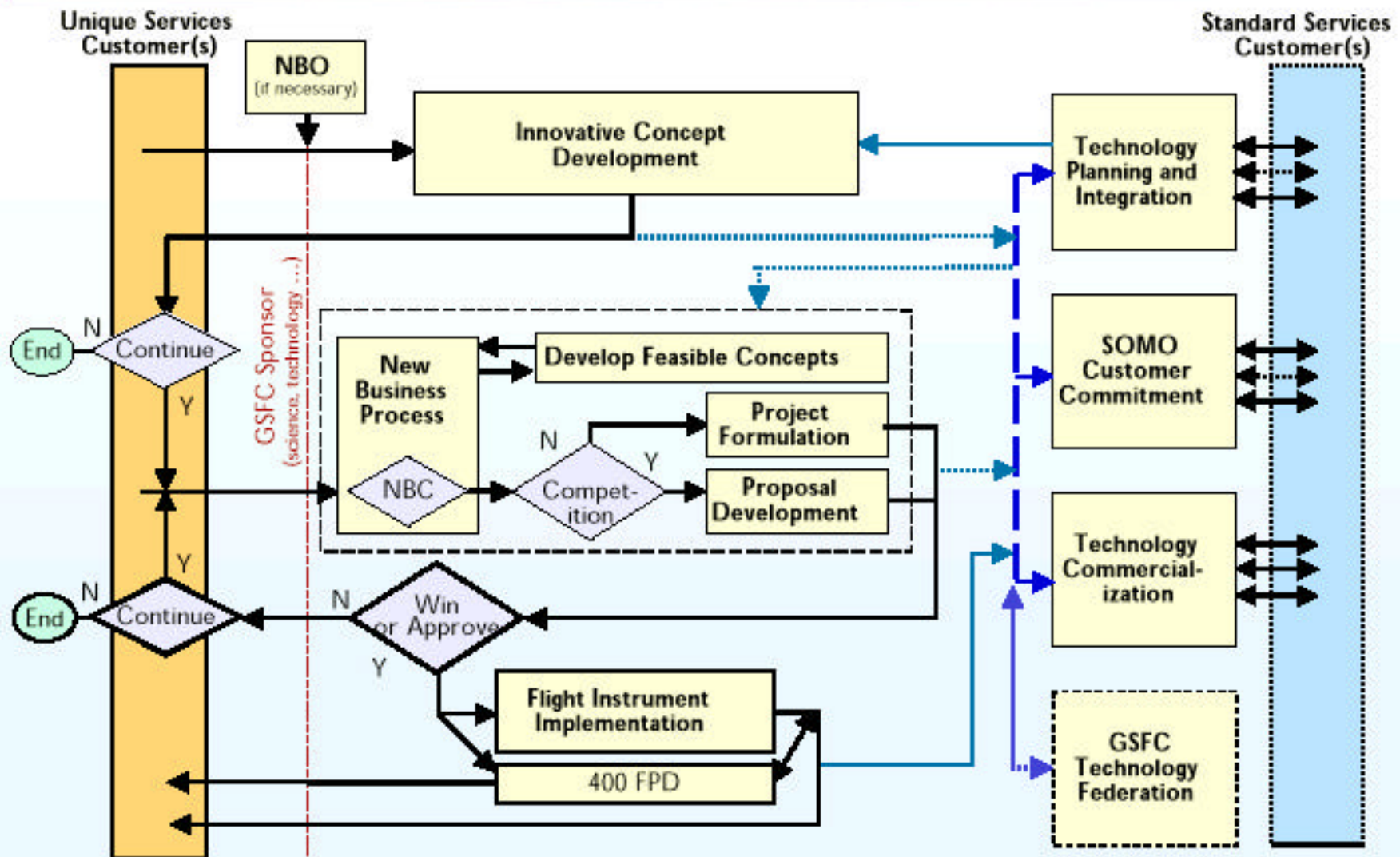
AETD Organization



Organization



STAAC Integrated Process



Core Processes and Organizational Responsibility



	NTPIO	SOMO	SED	MIPD	TCO	SBMO
Innovative Concept Development Champion: Jim Andary	S	I	L	S		
Project Formulation Champion: Tom Taylor	I	I	S	L	I	S
Technology Planning & Integration Champion: Gary Martin	L		I	I	I	S
SOMO Customer Commitment Champion: John Dalton		L				
New Business and Proposal Development Champion: Bonnie Norris		I	S	L		S
Flight Instrument Implementation Champion: Rich Barney	I		S	L		S
Technology Commercialization Champion: Wayne Hudson	I		I		L	S



Process Lead



Process Support



Process Information



“Engineering” Goals

› **Key Goals of GSFC Engineering (STAAC and AETD):**

- Provide the engineering and technology capability required by our in-house Earth and Space Scientists as they fulfill their leadership role in the conceptualization, development, and use of advanced instruments
- Formulate the advanced mission architectures required to meet ever increasing scientific demands at the minimum cost
- Provide the engineering and technical expertise required to win competitive mission opportunities
- Develop and implement a broad based technology program with our partners to enable future science
- Provide an organizational focus for developing technical and interpersonal competencies of engineers
- Broaden availability of engineering support to the external science community
- Meet commitments to ongoing instrument and spacecraft development projects



“Engineering” Challenges

- › **Controlling overhead in a “full cost” environment (meeting “National Resource” expectations to provide specialty area expertise and services while achieving “Center of Excellence” expectations as a lab with cost-effective practices)**
- › **Balancing available staff for initiatives in science conceptualization, mission architecture, and technology against current commitments**
- › **Ensuring that in-house work is both aligned with our role as a government laboratory and sufficient to meet our need to develop and sustain key system development skills**
- › **Defining methods for support to external science community**
- › **Defining effective way to maintain adequate reserve capacity to address problems that arise on current projects**